

## **TACHYARRHYTHMIA DETECTION AND DISCRIMINATION BASED ON CURVATURE PARAMETERS**

### **Abstract**

5 Estimating a frequency of a sampled cardiac rhythm signal and classifying the  
rhythm. The received signal is sampled and transformed into a curvature series. A lobe  
in the curvature series corresponds to a characteristic point in the sampled series.  
Characteristic points are selected based on a time of a lobe in the curvature series and,  
in one embodiment, an amplitude of the signal at the time of the lobe. A frequency of  
the sampled series is estimated by autocorrelating a function of the series of the  
10 characteristic points. In one embodiment, the function is a time difference function.  
The rhythm is classified by plotting the timewise proximity of characteristic points  
derived from an atrial signal with characteristic points derived from a ventricular signal.  
Regions of the plot are associated with a particular rhythm and the grouping of the data  
corresponds to the classification.

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